

REMARKS

The Office Action dated April 13, 2004 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Upon entry of this Response, claims 1-43 will be pending in the present application. Claims 1, 12, 24, 31, and 38 are independent claims. Claims 1, 9, and 27 have been amended to more particularly point out and distinctly claim the invention. The subject matter added to claim 1 was previously recited in claim 3. No new matter has been added. Claims 12-23 and 31-43 having been allowed, claims 1-11 and 24-30 are respectfully submitted for consideration.

Rejection of Claims 9 and 27 Under 35 U.S.C. § 112, Second Paragraph:

Claims 9 and 27 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully submit that the above amendment of claims 9 and 27 directly addresses the issues raised in the Office Action and renders the rejection thereof moot.

At least in view of the above remarks and amendment of claims 9 and 27, reconsideration and withdrawal of this rejection is respectfully requested.

Rejection of Claims 1-2, 4-8, 24, and 27 Under 35 U.S.C. § 102(e):

Claims 1-2, 4-8, 24, and 27 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,041,065 to Melvin (Melvin '065). This rejection is respectfully traversed.

Claim 1, upon which claims 2 and 4-8 depend, recites a system connecting multiple repeaters into a single collision domain. The system includes a first repeater having a plurality of network ports and stack connectors. The system also includes a second repeater having a plurality of network ports and stack connectors. Further, the system includes a stacking bus connecting the first repeater via the stack connectors of the first repeater to the second repeater via the stack connectors of the second repeater and configured to relay carrier signals, collision signals, and data between the first and the second repeaters. Also, the first repeater is configured to send the collision signal to itself via a two-way pin at the same time that it sends the collision signal to the second repeater via the stacking bus.

Claim 24, upon which claim 27 depends, recites a method for expanding a collision domain. The method includes the step of determining if a collision exists at a repeater within a plurality of repeaters coupled to a stacking bus. The method also includes, if a collision exists, at the repeater, the step of sending a collision signal to every repeater within the plurality of repeaters via the stacking bus, each repeater of the plurality of repeaters being configured to generate and send a jamming pattern to physical ports thereof upon receiving the collision signal.

The claimed invention enables the effective integration of multiple repeaters into a single collision domain. Also, systems and methods are provided that are able to handle high-speed, low-speed, or mixed-speed management interconnections between repeaters.

In addition, systems and methods provided by the claimed invention are highly versatile, yet have low cost and an ease of design.

It is respectfully submitted that Melvin '065 fails to disclose or suggest the elements of any of the presently pending claims. Therefore, it is further submitted that Melvin '065 fails to provide at least the advantages discussed above.

Melvin '065 discloses, in Figure 1 thereof, three repeater circuits 16, 17, 18, a number of ports 19-30, and an inter-repeater bus 15. Melvin '065 also discloses that “repeaters provide such basic functions as signal amplification, signal symmetry, signal timing, jitter reduction, preamble regeneration, collision handling, collision jam generation and electrical isolation” (column 1, lines 36-39).

However, Melvin '065 fails to disclose or suggest at least the “first repeater” recited in claim 1 of the present application, “wherein said first repeater is configured to send said collision signal to itself.” Melvin '065 also fails to disclose or suggest at least “sending a collision signal to every repeater within said plurality of repeaters,” as recited in claim 24 of the present application.

As acknowledged on page 4 of the Office Action, Melvin '065 fails to disclose how collision handling is actually performed. Therefore, Melvin '065 fails to disclose or suggest that any of the repeater circuits 16-18 disclosed therein are configured to send collision signals to themselves. In view of the above, Applicants point out that Melvin '065 fails to disclose or suggest at least the “first repeater” recited in claim 1, which “is configured to send said collision signal to itself”. Additionally, since Melvin '065 fails to

disclose or suggest that repeater circuits 16-18 send collision signals to themselves, Melvin '065 further fails to disclose or suggest the "sending" step recited in claim 24, wherein a collision signal is sent to every repeater.

At least in view of the above, Applicants respectfully submit that Melvin '065 fails to disclose or suggest the subject matter recited in claims 1 and 24 of the present application. Applicants further submit that claims 1 and 24 are therefore patentable over Melvin '065.

Claims 2, 4-8, and 27 all depend upon either claim 1 or 24 and thereby inherit all of the patentable distinctions thereof. Therefore, Applicants respectfully submit that claims 2, 4-8, and 27 are patentable over Melvin '065 at least for the reasons discussed above in connection with claims 1 and 24.

Reconsideration and withdrawal of the rejection of claims 1-2, 4-8, 24, and 27 under 35 U.S.C. § 102(e) as being anticipated by Melvin '065 is respectfully requested.

Rejection of Claim 3 and 9 Under 35 U.S.C. § 103(a):

Claims 3 and 9, which each depend upon claim 1, were rejected under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of U.S. Patent No. 4,638,311 to Gerety (Gerety '311). Although it is acknowledged in the Office Action that Melvin '065 is totally silent as to how the collision detection is actually performed, it is alleged that Gerety '311 may be combined with Melvin '065 to produce the claimed invention. This rejection is respectfully traversed.

As discussed above, Melvin '065 discloses repeater circuits 16-18, inter-repeater bus 15, and ports 19-30. However, Melvin '065 fails to disclose or suggest at least the "first repeater" recited in claim 1 of the present application, "wherein said first repeater is configured to send said collision signal to itself."

Gerety '311, in Figure 1 thereof, discloses peripherals 16, nodes 14, and communication bus 12. Gerety '311 also discloses that "each node 14 interconnects with a collision detection apparatus 20 on the communication bus side 22 thereof" (column 3, lines 3-5).

However, Gerety '311 fails to disclose or suggest that nodes 14 disclosed therein are in any way analogous to repeater circuits 16-18 disclosed in Melvin '065. More specifically, Gerety '311 fails to disclose or suggest that nodes 14 disclosed therein are capable of "signal amplification", which Melvin '065 discloses as a "basic function", of repeaters (column 1, lines 36-37).

Therefore, Applicants respectfully submit that one skilled in the art would not be motivated to modify repeater circuits 16-18 disclosed in Melvin '065 in view of nodes 14 disclosed in Gerety '311. Rather, one skilled in the art would understand that these two types of components are distinct from each other. Hence, Applicants respectfully submit that a *prima facie* case of obviousness has not been established in this instance because the "suggestion or motivation...to combine reference teachings" required under MPEP §2143.01 to establish such obviousness has not been shown. In other words, Applicants

respectfully further submit that Melvin '065 and Gerety '311 have been improperly combined in the Office Action.

In view of the above, reconsideration and withdrawal of the rejection of claims 3 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of Gerety '311 is respectfully requested.

Rejections of Claims 10 and 28 Under 35 U.S.C. § 103(a):

Claims 10 and 28 were each rejected under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of U.S. Patent No. 5,978,383 to Molle (Molle '383). Although it is acknowledged in the Office Action that Melvin '065 fails to disclose a carrier signal being what is used to detect the collision, it is alleged that Molle '383 may be combined with Melvin '065 to yield the claimed invention. This rejection is respectfully traversed.

As discussed above, Melvin '065 fails to disclose or suggest at least the “first repeater” recited in claim 1 of the present application, “wherein said first repeater is configured to send said collision signal to itself”.

Molle '383 discloses “repeaters [that]...participate in collision handling in order to reduce the time wasted resolving collisions” (column 5, lines 36-38). Molle '383 also discloses that “[i]n the event of a collision, each port [in a repeater]...will...send a...jam signal to the repeater core...and...not transmit any further portion of the incoming signal to the core” (column 5, lines 49-59).

However, Molle '383 fails to disclose or suggest at least the "first repeater" recited in claim 1, "wherein said first repeater is configured to send said collision signal to itself". Therefore, Applicants respectfully submit that Molle '383 fails to address or eliminate at least the above-discussed shortcoming of Melvin '065.

Claims 10 and 28 depend upon claims 1 and 24, respectively, and thereby inherit all of the patentable distinctions thereof. Therefore, Applicants respectfully submit that claims 10 and 28 are patentable at least for the reasons discussed above in connection with claims 1 and 24. Therefore, reconsideration and withdrawal of the rejection of claims 10 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of Molle '383 is respectfully requested.

Rejection of Claim 11 Under 35 U.S.C. § 103(a):

Claim 11, which depends upon claim 1, was rejected under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of Molle '383 and further in view of Gerety '311. In the Office Action, it is acknowledged that, neither Melvin '065 nor Molle '383 discloses the collision detection method recited in the claimed invention. However, it is alleged in the Office Action that Gerety '311 may be combined with Melvin '065 and Molle '383 to produce the claimed invention. This rejection is respectfully traversed.

As discussed above in connection with the rejection of claims 3 and 9, Melvin '065 and Gerety '311 cannot be combined to establish a proper case of *prima facie* obviousness because no suggestion of or motivation for such a combination has been shown. At least for this reason, Applicants respectfully submit that claim 11, has been

improperly rejected over Melvin '065, Molle '383, and Gerety '311. Reconsideration and withdrawal of the rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of Molle '383 and further in view of Gerety '311 is therefore respectfully requested.

Rejection of Claims 25-26 Under 35 U.S.C. § 103(a):

Claims 25-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of U.S. Patent No. 5,301,303 to Abraham et al. (Abraham '303). Although it is acknowledged in the Office Action that Melvin '065 fails to disclose what signals are on the backplane, it is alleged that Abraham '303 may be combined with Melvin '065 to produce the claimed invention. This rejection is respectfully traversed.

As discussed above, Melvin '065 fails to disclose or suggest at least the “first repeater” recited in claim 1 of the present application, “wherein said first repeater is configured to send said collision signal to itself”.

Abraham '303 discloses a “backplane collision detection method using slot-ID [that] allows parallel bit-comparison with collision enforcement signaling to ensure collision detection on a backplane” (column 20, lines 59-62). However, Abraham '303 fails to disclose or suggest at least the “first repeater” recited in claim 1, “wherein said first repeater is configured to send said collision signal to itself”. Therefore, Applicants respectfully submit that Abraham '303 fails to address or overcome at least the shortcomings of Melvin '065 discussed above in connection with claim 24.

Claims 25-26 depend upon claim 24 and thereby inherit all of the patentable distinctions thereof. Therefore, Applicants respectfully submit that claims 25-26 are patentable at least for the reasons discussed above in connection with claim 24. Hence, reconsideration and withdrawal of the rejection of claims 25-26 under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 in view of Abraham '303 is respectfully requested.

Rejection of Claim 29 under 35 U.S.C. § 103(a):

Claim 29 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065. Although it was acknowledged in the Office Action that Melvin '065 fails to disclose a 1-bit wide databus, Official Notice was taken that a 1-bit wide bus at 10 MHz is also a 10 Mbit bus. This rejection is respectfully traversed.

M.P.E.P. §2144.03 specifies that, "the notice of facts beyond the record which may be taken by the examiner must be 'capable of such instant and unquestionable demonstration as to defy dispute'". Applicants respectfully submit that the above-discussed Official Notice does not meet this standard.

More specifically, Applicants respectfully submit that a 1-bit wide bus operating at 10 MHz may merely describe a data rate of a single wire of a stacking bus. Therefore, contrary to the Official Notice, such a 1-bit wide bus at 10 MHz is not equivalent to a 10 Mbit bus. Rather, to obtain a 10 Mbit bus from a 1 bit wide bus, appropriate control/clock signals must also be provided. Since providing such signals is not a trivial undertaking, and does not constitute either an "obvious" or equivalent modification, Applicants

respectfully submit that the Official Notice was improper and request reconsideration and withdrawal thereof.

In addition, claim 29 depends directly upon claim 24, which has been shown above to be patentable, and therefore inherits all of the patentable distinctions thereof. Therefore, Applicants respectfully submit that claim 29 is patentable at least for the reasons discussed above in connection with claim 24. At least in view of the above, reconsideration and withdrawal of the rejection of claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Melvin '065 is respectfully requested.

Allowable Subject Matter:

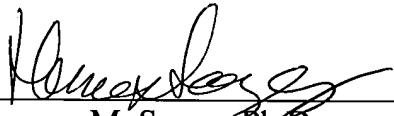
Applicants thank the Examiner for acknowledging that claims 12-23 and 31-43 are allowed. Applicants also thank the Examiner for acknowledging that claim 30 contains allowable subject matter. In view of the above remarks, Applicants respectfully submit that claim 30 is in allowable form. Therefore, reconsideration and withdrawal of the objection to claim 30 is respectfully requested.

Applicants respectfully submit that all of the issues raised in the Office Action have been addressed and that all of the rejections included in the Office Action have been overcome. Hence, Applicants respectfully further submit that claims 1-2 and 4-43 of the present application contain allowable subject matter. Therefore, it is respectfully requested that all claims pending in the present application be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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